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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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YUKIJI YODA

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EXAMINER

JAGAN, MIRELLYS

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/309,264	Applicant(s) YODA ET AL.	
	Examiner Mirellys Jagan	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/14/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities:

It is not clear in claim 10 what the signal from the machine tool is indicating, i.e., is it indicating the completion of a change in movement of the tool or the workpiece/pallet?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,825,245 to Osburn et al [hereinafter Osburn] in view of U.S. Patent 5,291,662 to Matsumiya et al [hereinafter Matsumiya].

Osburn discloses a machining tool comprising a tool (40) for machining a workpiece that is placed on a pallet (30) that forms part of an automatic pallet changer that horizontally moves the pallet from a waiting position (47B) to a machining position (32) located at an inlet of the machining tool next to the tool (40) so that the tool (40) may be used to machine the workpiece. The machining tool has rotating means (27) for pivoting the workpiece to the waiting position (47B) directly after the workpiece has been machined by the machining tool (40). The tool of the

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machining tool is moved in along an X-axis (horizontal), Y-axis (vertical), and Z-axis (orthogonal) for machining the workpiece (see figures 1 and 2-6; and column 3, lines 24-50).

Osburn does not disclose the tool having means for measuring the machined workpiece, and therefore does not disclose a coordinate-measuring machine arranged in the vicinity of the machining tool, the coordinate-measuring machine having a probe that is brought close the workpiece after the workpiece has been machined and relocated to the waiting position for measuring the workpiece, wherein the probe is moved in a horizontal direction and in a direction orthogonal to the movement of the tool; and the coordinate-measuring machine has refuge means and is capable of taking refuge in a linear motion to a position in which the coordinate-measuring machine does not prevent the workpiece from moving.

Matsumiya discloses a machining tool (215) for machining a workpiece, wherein the machining tool has means for measuring the machined workpiece. The means for measuring the machined workpiece comprises a coordinate-measuring machine (201) arranged in the vicinity of the machining tool (215) at a location (e.g., 217) (waiting position) where the machined workpiece is placed. The coordinate-measuring machine (201) has a probe that is brought close the workpiece to measure the workpiece after the workpiece has been machined. The probe is movable in three directions, and is therefore moved horizontally (e.g., X-axis), vertically (e.g., Y-axis), and orthogonally (Z-axis) toward a measurement surface of the machined workpiece. The coordinate-measuring machine (201) has refuge means (wheels) and is capable of taking refuge in a linear motion, i.e., is moveable along a straight line, to a position away from the machining tool (215) so that it does not prevent the workpiece from moving. Matsumiya teaches that it is beneficial to provide a machining tool with means for measuring the machined

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workpiece in order to measure the shape (form/dimension) of the machined workpiece in real time and prevent the production of inferior goods (see figure 14; and column 14, lines 29-48).

Referring to claims 3, 5, and 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn by adding means for measuring the machined workpiece at a location adjacent to the machining tool to measure the workpiece in the waiting position after it has been machined, as taught by Matsumiya, in order to measure the shape of the machined workpiece in real time and prevent the production of an inferior workpiece.

Furthermore, the tool of the machining tool and the probe of the measuring means of Osburn and Matsumiya will move in a horizontal direction and orthogonal to each other since they both move in the X-, Y-, and Z-axes.

Further referring to claims 3 and 4, the method steps of claims 3 and 4 will naturally be followed during the normal operation of the machining tool with measuring means disclosed by Osburn and Matsumiya as stated above.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osburn and Matsumiya, as applied to claims 3-7, 11, and 12 above, and further in view of U.S. Patent 5,996,239 to Ohnheiser.

Osburn and Matsumiya disclose a machining tool having all of the limitations of claim 8, as stated above in paragraph 3, except for the coordinate-measuring machine taking refuge with a rotational motion.

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Ohnheiser discloses a machining tool for machining a workpiece. A coordinate-measuring machine is arranged in the vicinity of the machining tool and has a probe that is brought close the workpiece to measure the workpiece after the workpiece has been machined. The probe is movable in three directions, and is moved horizontally and vertically toward a measurement surface of the workpiece. The coordinate-measuring machine has refuge means (hinges) and is capable of taking refuge with a rotational motion to a position away from the machining tool so that it does not prevent the workpiece from moving. Ohnheiser teaches that it is beneficial to pivotally connect the coordinate measuring machine to the machining tool in order to properly position the coordinate measuring machine relative to the workpiece (see figure 1; column 2, lines 13-52; column 3, lines 41-54; and column 6, lines 3-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn and Matsumiya by pivotally connecting the coordinate-measuring machine to the machining tool, as taught by Ohnheiser, in order to properly position the coordinate measuring machine more quickly relative to the workpiece.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osburn and Matsumiya, as applied to claims 3-7, 11, and 12 above, and further in view of U.S. Patent 4,473,883 to Yoshida et al [hereinafter Yoshida].

Osburn and Matsumiya disclose a machining tool having all of the limitations of claims 9 and 10, as stated above in paragraph 2, except for the machining tool and the coordinate-measuring machine mutually exchanging a measurement enabling and a measurement

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completion signal, both signals being related to the movement of the workpiece by the changer; wherein the coordinate-measuring machine leaves a refuge position after having received a completion signal from the machining tool, and the changer starts moving the workpiece after having received a signal indicating that the probe is back in the refuge position.

Yoshida discloses a machining tool for machining a workpiece. The machining tool includes a pallet changer for moving a pallet into a machining position and a measuring position. A coordinate-measuring machine (MUNT) is arranged to measure the workpiece in the measuring position after the workpiece has been machined. The coordinate-measuring machine and the machining tool are connected to each other such that they exchange a measurement enabling and a measurement completion signal, both signals being related to the movement of the workpiece by the changer; wherein the coordinate-measuring means leaves a refuge (non-measuring) position and enters a measurement position to measure the workpiece after having received a completion signal from the machining tool, and the changer starts moving the workpiece after having received a signal indicating that the coordinate-measuring means has reentered the refuge (non-measuring) position. Yoshida teaches that connecting the coordinate-measuring machine and the machining tool in such a manner is useful since it automates the loading of the workpiece to and from the machining tool once a measurement is obtained (see figure 14; column 24; lines 24-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the machining tool disclosed by Osburn and Matsumiya by connecting the coordinate-measuring machine to the machining tool, as taught by Ohnheiser, in

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order to automate the loading of the workpiece to and from the machining tool once a measurement is obtained.

Response to Arguments

6. Applicant's arguments filed 6/14/04 have been fully considered but they are not persuasive.

Applicant's arguments that the rejection of claim 12 is improper because Osburn does not disclose a coordinate-measuring machine, and that the rejection of claims 3, 5, and 12 is improper because Osburn does not disclose a coordinate-measuring machine and therefore does not disclose measuring the workpiece in the waiting position are not persuasive since the rejections are based on the combination of Osburn and Matsumiya, where Matsumiya teaches using a coordinate-measuring machine with a machining tool for measuring a workpiece at a waiting position after it has been machined. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, in response to Applicant's argument that there is no suggestion or motivation in Osburn to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958

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F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teaching, suggestion, and motivation is found in the references themselves since Matsumiya teaches that it is beneficial to provide a machining tool with coordinate measuring means for measuring the machined workpiece as stated above in paragraph 3.

Applicant's arguments that Matsumiya fails to disclose or suggest measuring the work at a waiting position of a pallet changer are not persuasive since the rejections are not based on Matsumiya having a pallet exchanger. The rejections are based on Matsumiya measuring the machined workpiece at a waiting position, i.e., a location removed from the tool (see figure 14), after the workpiece has been machined. As stated above, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

Applicant's arguments regarding the rejections in the last Office action regarding the movement of the tool and probe to the workpiece have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment to claims 3, 5, and 12, which no longer claim that the tool and probe are moved to the workpiece.

Applicant's arguments that Matsumiya fails to disclose a tool and probe moving horizontally and orthogonal to each other are not persuasive since the rejections are not based on the movement of the machining tool. The rejections are based on the three-dimensional movement of the measuring machine probe, as stated in column 14, lines 29-48 of Matsumiya.

Applicant's arguments that the Office action restates the advantages of the present invention to justify the combination of the references are not persuasive since the rejections are based only the teachings in the references themselves as stated in the rejections above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
August 24, 2004



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